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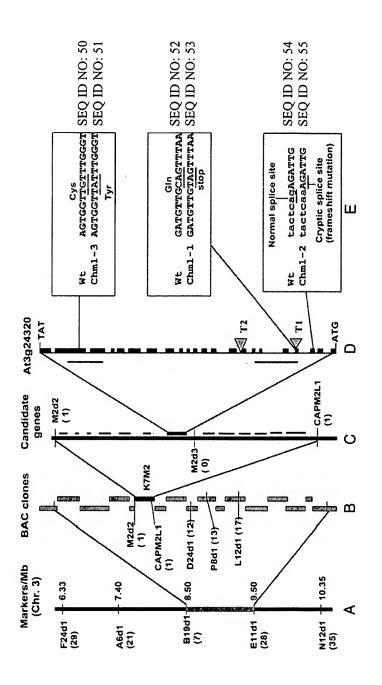


Figure 1

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LSPORRMILITGPNMGGKSTYMROT 627  LAKDN-LWVITGPNMGGKSTILROV 1096  IGGAEKASFILLTGPNMGGKSTILROV 1096  NT-VDMOSLFILTGPNGGKSSILRSI 781  :::*** ****::*	
LSPORRALIITGPNMGGKSTYMROT LAKDN-LWVITGPNMGGKSTLIRQN IGGAEKASFILLTGPNMGGKSTLIRQN IGGAEKASFILLTGPNGGGKSTLIRQN NT-VDMQSLFLLTGPNGGGKSTLIRSI :::******::*  M1  M1  M2  M2	
LLEYRNG DEYE LEYDDA SEQ ID NO:56  VVLEGNG SEYE LYEEQA SEQ ID NO:57  VVEFRAG KEYE LEENDA SEQ ID NO:58  VLLCRVG EFYE LYEEQA SEQ ID NO:58  VLLCRVG EFYE AIGIDA SEQ ID NO:58  LLEYRNG EFYE AIGIDA SEQ ID NO:59  LLEYRNG EFYE AIGIDA SEQ ID NO:59  LLEYRNG EFYE AIGIDA SEQ ID NO:60  DKPGIRITEGRHPVVEQVLNEPFIANPLNLSPORRALIITGPNMGGKSTYMROT 627  ESNKLEVVNGRHLAVEEGLSARSLETETANNCELAKDN-LWVITGPNMGGKSTILLROV 1096  LDEGAKPLDGASRMKLIGLSPYWFDVSGTAVHNT-VDMGSLFILLTGPNMGGKSTILLROV 1096  LDEGAKPLDGASRWKLIGLSPYWFDVSSGTAVHNT-VDMGSLFILLTGPNGGGKSTILROV 1096  AIVVILAQIGCFVPCSKARVGIVDRLFSRVGSADDLYNEMSTFMVEMTETANILHNATEY 687  AIVVILAQIGGEVPESTEVSFVDKICVRMGANDHARGQSTFTELELETETASTANILHNATEY 687  CAAALLGISGLMVPAESACIPHFDSIMLHMKSYDSPVDGKSSFQVEMSETRSIVSQATER 841  CAAALLGISGLMVPAESACIPHFDSIMLHMKSYDSPVDGKSSFQVEMSETRSIVSQATER 841  SLVLADEIGRGTSTYDGLSLAWACAENLANKIRALTLFATHY-FELTQLPEKGECVANVH 746  SLALLDEIGRGTSGRGSTSTANALKYLLENNQCRTLFATHFGQELKGIDNKCSKGMSE 904  SLVLIDEIGRGTSGRGTSTANGTLGRVUSLDTSG-CLGIVSTHY-HELSVDYQTNPRVSICH 1215  SLVLIDEIGRGTETAKGTCIRAGSVTEHFIEKVQCRFFSTHY-HELSVDYQTNPRVSICH 1215  SLVLIDEIGRGTETAKGTCIRAGSVTEHFIEKVQCRFFSTHY-HELSVDYQTNPRVSICH 1215  SLVLIDEIGRGTETAKGTCIRAGSCAGGESTHY-HELSVDYQTNPRVSICH 1215	M3 / M4
27 396 3397 139 1039 723 1097 785 11097 785 11157	
A  Muts_Eco 27  AtMshi yeast 96  AtMshi 139  Consensus 19  Consensus 19  Consensus 19  Muts_Eco 574  Muts_Eco 628  AtMshi 782  AtMshi 4845  AtMshi 4845  AtMshi 4845  AtMshi 845  AtMshi 845  AtMshi 845	

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		1 50
Arabidopsis	(1)	- MHWIIATRNAVVSFPKWRFINFRSSMRTMSSLKPSSPILLINRRYSEG
Common Bean	(1)	MYRAVIRNVAMFLPRCRSLSHESHSLEPFELSSLPSRFMRENGRMKNV
		MYRWATERNVAMF LPRCKSLSHESHSLEPFE ISSLESKFIRRINGRVKNV MYRWATERNVAMFFPRCCSFAHMTPSLEPFETSFAPSRFIRRINGCVKNV
Soybean	(1)	
Rice	(1)	MAIIORILASSIVAATPRWLPVAADSFLRRRHRPRCSPIPALIFNR
Tomato	(1)	MYWVTAKNVVVSVPRWRSLSLFLRPPLRRRFLSFSPHTLC
Consensus	(1)	MYRV TRNVVVS PRWR F SSF F S PSR L ING V N
- 111	(>	51 100
Arabidopsis	(46)	ISCURDGKSLKRITTASKKKKKTSSDVLTDKDLSHLVWWKERLQTCKKPST
Common Bean	(49)	SEXMONNEVSEGSERTEKKPKVENNVLDDKDLPHTSWWKERLOMEKKFSE
Soybean	(49)	PSMTDKKVS-RGSSRATKKPKIPNNVLDDKDLPHIMWWKERLOMCRKFST
Rice	(46)	RSWSKPRKVSRSISIVSRKKNKQGDLCNEGMLPHIKWWKEKMERCRKRSS
Tomato	(41)	REQURCVKERKFFATTAKKUKQEKSUPEEKDYVNIMWWKERMEFLRKESS
Consensus	(51)	SYIR K R S SKKLK P VLDDKDLPHILWWKERLQ CRKPST
		101 150
Arabidopsis	(96)	LOLIERLMY DILGLOPS LENGS LKDGNLNWEMLQFKSRFPREVLLCRVG
Common Bean	(99)	WOLTORLEESNILGEDSKLKNGSWKEGTLNWEMLQFKSKFPRQVLLCRVG
Soybean	(98)	VOLHERLEESNELGENSNLKNGSEKEGTLNWEMLQFKSKFPRQVLLCRVG
Rice	(96)	MOLTORLVYSNILGEDPILRNGSLKDGSLNTEMLOFKSKFPREVLLCRVG
Tomato	(91)	ALLAKRLTYCNILGVDPSLRNGSLKEGTLNSEMLQFKSKFPREVLLCRVG
Consensus	(101)	VQLI RL YSNLLGLDPSLRNGSLKEGTLNWEMLQFKSKFPREVLLCRVG
		151 200
Arabidopsis	(146)	EFYEALGIDACTLVEYAGLNPFGGLRSDSTPKAGCPIMNLRQTLDDLTRN
Common Bean	(149)	EFYEAWGIDACMLVEYAGLNPCGGLQSDSWPRAGCPVVNLRQTLDDLTQN
Soybean	(148)	EFYEAWGIDACILVEYVGLNPIGGLRSDSIPRASCPVVNLRQTLDDLTTN
Rice	(146)	DFYEAMGFDACTLVEHAGLNPFGGLRSDSTPKAGCPVMNLRQTLDDLTRC
Tomato	(141)	DFYEATGFDACILVEYAGLNPFGGLHSDSTPKAGCPVVNLRQTLDDLTRN
Consensus	(151)	EFYEAIGIDACILVEYAGLNPFGGLRSDSIPKAGCPVVNLRQTLDDLTRN
		201 250
Arabidopsis	(196)	GYSVCTVEEVQGPTPARSRKGRFISGHAHPGSPYVYGLVGVDHDLDFPDP
Common Bean	(199)	GYSVCITEEWQGPTQARSRKRRFISGHAHPGNPYVYGLAAVDHDINFPEP
Soybean	(198)	GYSVCIVEEAQGPSQARSRKRRFISGHAHPGNPYVYGLATVDHDLNFPEP
Rice	(196)	GYSVCIVEEIQGPTQARARKGRFISGHAHPGSPYVFGLAEVDHDWEFPDP
Tomato	(191)	GESVCWEEVQGPTQARARKSRFISGHAHPGSPYVFGLVXDDQDLDFPEP
Consensus	(201)	GYSVCIVEEVQGPTQARSRK RFISGHAHPGSPYVYGLA VDHDLDFPEP
compensuo	(201)	251 300
Arabidopsis	(246)	MPVVGISRSARGYCMISTFETMKAYSLDDGLTEEALVTKLRTRRCHHLFL
Common Bean	(249)	MPVIGISHSARGYCINMVLETMKTYSYEDCLTEEATVTKLRTCQYHHLFL
Soybean	(248)	MPVVGISHSARGYCINMVLETMKTYSSEDCLTEEAVVTKLRTCOYHYLEL
Rice	(246)	the transfer of the transfer o
Tomato		MPVVGISRSAKGYCIISVYETMKIYSVEDGLTEEAVVTKLRTCRCHHFFL
Consensus	(251)	MPVVGISRSARGYCIISVLETMKTYS EDGLTEEAVVTKLRTCRYHHLFL 301 350
ما د مسمله د ما معدد	(206)	
Arabidopsis	(296)	HASLRHNASGTCRWGEFGEGGLLWGECSSRNFEWFEGDTLSELLSRVKDV
Common Bean		HESTTODSCGTSKWGEFGEGGLLWGECSSRHEEWEDGSPLSDLLVKVKET
Soybean		HISLIRRISCGTCNWGEFGEGGLLWGECSSRHFDWFDGNPWSDLLAKVKEU
Rice		HSSLRNNSSGTSRWGEFGEGGLLWGECSGKSFEWFDGNPHEELLCKVREI
Tomato		HNSLKNNSSGTSRWGEFGEGGLLWGECNARQQEWLDGNPADELLFKVKEU
Consensus	(301)	HTSLRNNSSGTSRWGEFGEGGLLWGECSSR FEWFDGNPISELL KVKEL
		351 400

Figure 3

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Arabidopsis	(346)	YGUDDEVSFRNYNVPSKNRPRPLHLGTATQIGALPTEGIPCLLKYLLEST
Common Bean	(349)	YGLDDEVIFRNTTVSSRHRARPLTLGTSTQIGATHTEGIPSLLKWLSPS
Soybean	(348)	YSTODDEWNFRNTHVSSGHRARPLTLGTSTQIGATETEGIPSLLKWLLESN
Rice	(346)	YGLEEKTVFRNYSVSLEGREOPLYLGTATQIGVIPTEGIPSLLKIYLPPN
Tomato	(341)	YGLNDDIPFRNYIVVSENRPRPLHLGTATQIGATPTEGIPCLLKWLPPH
Consensus	(351)	YGLDDEVTFRNVTVSS RPRPLHLGTATQIGAIPTEGIPSLLKVLLPP
		401 450
Arabidopsis	(396)	CSGLPSLYMRDLLLNPPAWDTALKTOETCKLMSTVTCSIPEFTCWSSAKL
Common Bean	(399)	ENGLPWLYTRNLLLNPPSWETASKTOETCKLMSSTTCSIPEFTCMSSAKL
Soybean	(398)	GNGLPWLYTRELLLNPPSMETASKTQATCKLMSSWTCSIPEFTCWSSAKL
Rice	(396)	FGGLPSLYTRDLLLNPPSFDWASSWOEACRLMGSTTCSIPEFTCTPAAKL
Tomato	(391)	GSGLPVLYTRDLLLNPPAVETSSDTQEACRLMMSVTCSIPDFTCTSSAKL
Consensus	(401)	C GLPVLYIRDLLLNPPSYEIASKIQETCKLMSSVTCSIPEFTCVSSAKL
	(/	451 500
Arabidopsis	(446)	VKLLEQREAN WEFCRIKN WEDDYLH WHRH RELVEIN KLLMDPRWWATGI
Common Bean	(449)	VKLLEWRENNHMEFCRIKNVLDEULHMAKTSELNEILKNLDDPEWATTGL
Soybean	(448)	VKLLEWREMNHMEFCRIKNVLDETLOMYSTSELNETLKHLTEPEWWATGL
Rice	(446)	VKLLESKEVNHUEFCRIKNVEDEVLFMGSNÆELSAIENKLEDPAAUVTGF
Tomato	(441)	VKLLELREANHVEFCKIKSMVEETLQLYRNSELRAIMELLMDPTWVATGL
Consensus	(451)	VKLLE REVNHIEFCRIKNVLDEIL MYR SEL EILK LIDPTWVATGL
COMBCMBUB	(431)	501 550
Arabidopsis	(496)	KIDEDAFVNECHWASDTIGEMISLDENESHONWSKCDNWPNEFFYDMESS
Common Bean	(499)	DIDBETTVSGCEVASSKISETISEDGGN-DOKINSLSINPYEFFEDTESK
Soybean	(499)	EIDFETUVAGCEIASSKIGETASSEDDEN-DOKTUSESTUPPEFFEDMESK
Rice	(496)	
		KVEADILVNECSFISORIAEVISLGGES-DOALTSSEYTPKEFFNGMESS
Tomato	(491)	KVDEDTUVNECGKISCRISETUSMHGEN-DOKTSSYPITPNDFFEDMELL
Consensus	(501)	KIDFDTLVNEC AS KISEIISLDGEN DQKISS IP EFFEDMES
2 1 1 2	(= 4 = 1	551 600
Arabidopsis	(546)	WRGRMKGTHDEEEITQVEKSAEALSMAMAEDFHPFFTSRTKATTASRGGPK
Common Bean	(548)	WKGRIIKRYHIDEVETAVQKAAEVLHIAVTEDFYPVVSRVKATIAPLGGPR
Soybean	(547)	wkgriikrthiiddvetavekaaealhiiavtedfypvvsrtikaivapilggpk
Rice	(545)	WKGRMKRVHAEEEFSNVDIAAEALSTAVIEDFLPIISRMKSVMSSNGSSK
Tomato	(540)	WKGRWKRITHIZEEAWAEVEKAADALSIZAILTEDFLPICISRITRATMAPIZGGTK
Consensus	(551)	WKGRVKRIHIEE FT VEKAAEALSIAVTEDFLPIISRIKATMAPLGGPK
		601 650
Arabidopsis	(596)	GEIAYAREHESVWFKGKRFTPSTWAGTAGEDOIKOLKPALDSKGKKVGEE
Common Bean	(598)	GEISYAREHEAVWFRGKRFTPSTWSGSPGEEQIKQLRHALDSKGKRVGEE
Soybean	(597)	GEISYAREQEAVWFKGKRFTPNEWAGSPGEEQIKQLRHAEDSKGRKVGEE
Rice	(595)	GEISYAKEHESVWFKGRRFTPNWANTPGELQIKQLKPAIDSKGRKVGEE
Tomato	(590)	GEILYAREHGAVWFKGKRFVPTVWAGTAGEEQIKQLRPALDSKGKKVGEE
Consensus	(601)	GEISYAREHEAVWFKGKRFTPSLWAGTPGEEQIKQLRPALDSKGKKVGEE
		651 700
Arabidopsis	(646)	wfttpkveialvryheasenakarvlellrelsvklotkinylvfasmil
Common Bean	(648)	WFTTPKVEAALTRYHEANAKATERVLETLRELATELHYSINTLVFSSTEL
Soybean	(647)	WFTTPKVEAALTRYHEANAKAKERVLETLRGLAAELQYSINTLWFSSMLL
Rice		
KICE	(645)	WFTTIKVENALTRYHEACDNAKRKVLELLRGLSSELODKINNLWFCSTML
Tomato		WFTTIKVENALTRYHEACDNAKRKVLELLRGLSSELODKINNLWFCSTML
	(645)	

Figure 3 (cont'd)

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		701 750
Arabidopsis	(696)	750 MISKALFSHACEGRRRKWWEPTEVGFSLDEGAKPEDGASRMKUEGESPYW
Common Bean	(698)	WIEKALFAHASEGRREWEPTTAESNGFEDVKSSDKIHGMKTVGTAPYW
Soybean	(697)	WIAKALFAHASEGRREWWEPTIIVESHGFEDVKSIDKWHGMKISGILPYW
Rice	(695)	IIIKALFGHVSEGRRRGWMLPTIISPLCKDNVIEEISSEMELSGTFPYW
Tomato	(690)	WIAKSLFSHVSEGRRRNWEEPTETQFNKCQDTEAENGEDGMKTIGESPYW
Consensus	(701)	VITKALFAHASEGRRRRWVFPTL ED KSLD T GMKISGLSPYW
Collsellads	(701)	751 ED KSLD I GMKISGLSFIW
Arabidopsis	(746)	FDVSSGTAVHNTVDMQSIFFLTGPNGGGKSSILRSICAAALLGIISGIMVP
Common Bean	(748)	HHWAEG-IMRNDVDMQSIFELTGPNGGGKSSILRSICAAALLGIGGIMVP
Soybean	(747)	HEAEG-VYRNDVDMQSJFLLTGPNGGGKSSFLRSTCAAALLGTGGEMVP
Rice	(743)	LDTNQGNATLNDVHMHSIFTLTGPNGGGKSSMLRSWCAAALLGTGGTMVP
Tomato	(740)	FDAARGTEVQDTVDMQSMFELTGPNGGGKSSELRSECAAALLGMCGFMVP
Consensus	(751)	FDIA G AV NDVDMQSLFLLTGPNGGGKSSLLRSICAAALLGICGLMVP
compenibub	(,,,,	801 850
Arabidopsis	(796)	AESACIPHFDSIMLHMKSYDSPVDGKSSFQVEMSETRSTVSQATSRSLVL
Common Bean	(797)	AESAVIPMFDSITLHMKSYDSPADKKSSFQVEMSEURSIIGGTTKRSLVL
Soybean	(796)	AESALIPMFDSITLHMKSYDSPADKKSSFOVEMSELRSTIGGTTNRSLVL
Rice	(793)	AASAMIPHFDSIMLHMKAYDSPADGKSSFQIEMSEURSEVCRATARSLVL
Tomato	(790)	AESAVIPHFDSIMLHMKSYDSPVDGKSSFQTEMSETRSETTGATSRSLVL
Consensus	(801)	AESAVIPHFDSIMLHMKSYDSPADGKSSFQVEMSEIRSII GATSRSLVL
COMBONDAD	(001)	851 900
Arabidopsis	(846)	IDEICRGTETAKGTCIAGSWESLDTSGCIGIVSTHLHGIFSLPLTAKNI
Common Bean	(847)	MDEICRGTETAKGTCIAGSTTETLERTGCLGWSTHLHGIFTLPLNTKST
Soybean	(846)	MDEICRGTETAKGTCIAGSTTETLDGIGCIGTVSTHLHGIFTLPLNKKNT
Rice	(843)	TDEICRGTETAKGTCIAGSTERLDNWGCEGTESTHLHGIFDLPLSMHNT
Tomato	(840)	IDEICRGTETAKGTCIAGSWIEILDEIGCEGIVSTHLHGIFDLPLKIKKI
Consensus	(851)	IDEICRGTETAKGTCIAGSIIETLD IGCLGIVSTHLHGIFTLPL IKNT
		901 950
Arabidopsis	(896)	TYKAMGAENWEGOTKPTWKLTDGWCRESLAFETAKREGWPESWIQRAEAL
Common Bean	(897)	VHKAMGTTCIDGQTIPTWKLTDGVCKESLAFETAIREGIPEPITRRAECL
Soybean	(896)	WHKAMGTTSIDGQIMPTWKLTDGWCKESLAFETAKREGTPEHLWRRAEYL
Rice	(893)	DFKAMGTEITDRCTQPTWKLMDGTCRESLAFQTARKEGMPDLTTRRAEEL
Tomato	(890)	WYKAMGAEYWDGQPTPTWKLIDGTCKESLAFETAQREGTPEILTQRAEEL
Consensus	(901)	VHKAMGTE IDGQIIPTWKLTDGVCKESLAFETAKREGIPE IIRRAE L
		951 1000
Arabidopsis	(946)	YLSVYAKDASAEVMKPDOTITSSNNDQQIQKPV
Common Bean	(947)	YKSVYAEENFPNEEKFSTCNNUNDUNFESLYSKGFLSGA
Soybean	(946)	YQLVYAKEMLFAENFPNEEKFSTCINVNNLNGIHIHSKRFLSGA
Rice		YLAMSTNSKHTSSAVHHEISIANSTVNSLVEKPNYLRNGLELQS
Tomato	(940)	YNSAYGNQIPRKIDQIRPLRSDIDINSTDNSSDQINGTRQIALDSSTKLM
Consensus	(951)	Y SVYA EK S INI NL TTSL A
		1001 1050
Arabidopsis	(979)	
Common Bean	(986)	
Soybean	(990)	
Rice		GSFGLLRKETESVVITICKKKLLDLYNKRSISELIEWVCWAVGAREOPPP
Tomato		HRMGUSSKKIEDAICHICEKKINELYKMKNPSEMPMVNCVILIAAREOPAP
Consensus	(1001)	M ILRKELERAITVIC KKIIEL KK EL EI CLLIGAREQPPP
		1051 1100

Figure 3 (cont'd)

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Arabidopsis Common Bean Soybean Rice Tomato Consensus	(1020) (1036) (1040) (1037) (1040) (1051)	STVGSSCWYMRRPDKRLYMGOTDDLEGRMRAHRAKEGMOGSSFLYLMVQ SVVGSSSWYVMFTPDKKLYMGETDDLEGRWRHRMKEGMDEASFLYFLVP SVVGSSSWYVMFRPDKKLYMGETDDLEGRWRHRMKEGMHDASFLYFLVP STVGRSSMYVMIRRDSKLYMGOTDDLVGRMSAHRSKEGMODATILYILVP STMGASSWYMMLRPDKKLYMGOTDDLEGRWRAHRMKEGMENASFLYFLVS STVGSSSVYVM RPDKKLYMGOTDDLEGRVRAHRLKEGM DASFLYFLVP
Arabidopsis	(1070)	1101 1150 GKSMACQMETLLINQLHEQGMSLANTADGKHRNFGTSSSLSTSDVVSIL-
Common Bean	(1076)	GKSMACQFESLLINQLSSOGFOLSNMADGKHRNFGTSNMA
Soybean	(1090)	GKSMACQFESLLINQLSGQGFQLSNMADGKHRNFGTSNMYT
Rice	(1087)	GKSTACQTETLLINQLPLKGEKLINKADGKHRNFGISLWPGEAIAA
Tomato	(1090)	GKSTACQLETLLINQLPNHGFQLTNWADGKHRNFG
Consensus	(1101)	GKSIACQLETLLINQL QGFQLSNIADGKHRNFGTS L
Arabidopsis	_	NO: 3
Common Bean	SEQ ID	NO: 47
Soybean	SEQ ID	NO: 31
Rice	SEQ ID	NO: 22
Tomato	SEQ ID	NO: 40
Consensus	SEQ ID	NO: 65

Figure 3 (cont'd)